PHARMACOGENOMICS, THE NEW PARADIGM OF PERSONALIZED MEDICINE, THROUGH THE MAJOR DEPRESSIVE DISORDER

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INTRODUCTION

- → **Personalized medicine:** diagnose, treat and prevent taking into consideration the patients' molecular and genetic profile
- → Moving away from "**one size fits all**" approach
- → **Pharmacogenomics** (whole genome) **and pharmacogenetics** (a specific gene): predict the response to a particular drug depending on the individual genetics → decide which treatment and dose will be more suitable
- → **Major Depressive Disorder (MDD)** affects 4,4% of the worldwide population. Often, it is treated with **citalopram,** which is detoxified above all through **CYP2C19** (an enzyme from the CYP450 family with 4 main variants: *1, *2, *3 and *17)

AIMS

The main aim is to spread the pharmacogenomics and pharmacogenetics to contribute to its future implementation. This is divided into:

- → Explain the main characteristics of it through an **Instagram profile** for **general Spanish speaking population**
- → **Awake interests to High School students,** as they are the future and could take an important role on its implementation
- → Convey to **nurses** that they can have an important paper **removing the trial and error treatment strategy** and **providing a good pharmacogenomics education**

METHODOLOGY

1) Initial research/organization

- → **Bibliographic research** through **PubMed** and **Google Scholar**
- → Information extraction from **MSD manual** and the database **PharmGKB**
- → **Key words:** "precision medicine", "pharmacogenomics", "(pharmacogenomics) AND citalopram", "(pharmacogenomics) AND CYP2C19", "CYP2C19"
- → **Schedule the seminars** (at INS Leonardo Da Vinci and COILL – Col·legi de Infermeres de Lleida)

Google Scholar

MSD

PubMed

PharmGKB

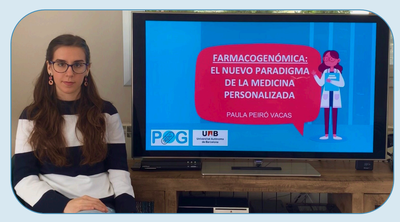
2) Seminars

- →**INS Leonardo Da Vinci** (12/03/2020)
- →**COILL – Col·legi de Infermeres de Lleida** (16/04/2020 and 17/04/2020)
- →**Contents:** genetics concepts review, personalized medicine introduction, differences between pharmacogenetics and pharmacogenomics, basic information about pharmacokinetics and pharmacodynamics, biotransformation and drug metabolism, pharmacogenomics in the MDD treatment (CYP2C19 and citalopram) and conclusions
- →**Final survey**

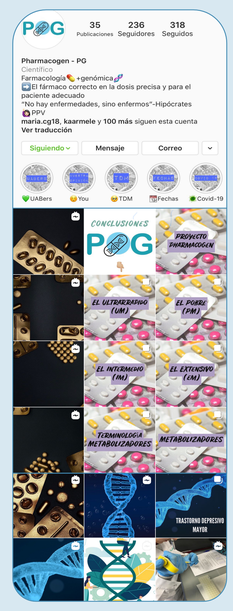
Seminar slides →

3) Instagram

- →Three main areas: **posts, instastories, IGTV videos**
- →**Photographs**: own elaboration, with Pixabay License or with Creative Commons LIcence
- →**Avatars design** to explain metabolizers types



@pharmacogen



CONCLUSIONS AND FUTURE PERSPECTIVES

N =103

- → Survey analysis is represented in the **graphs**
- → **9 out of 10** was the **average interest** of the topic
- → In order to receive more information is preferable the **Instagram profile** used and a **YouTube channel**
- → The most interesting parts were **the MDD example** and metabolizers explication
- → High number of followers and **positive feedback** from them

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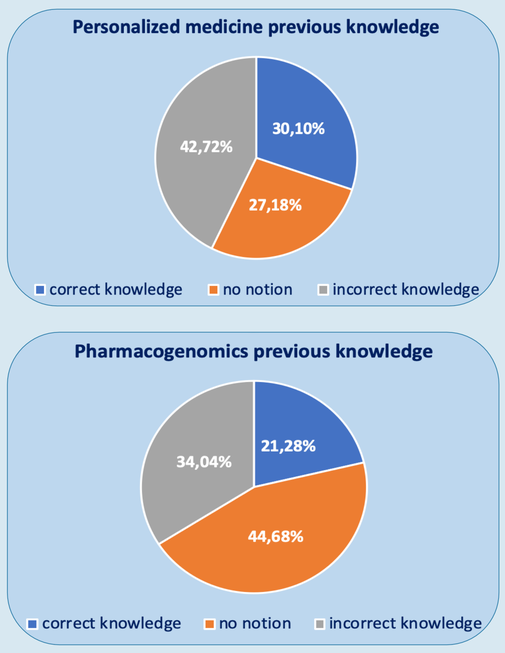
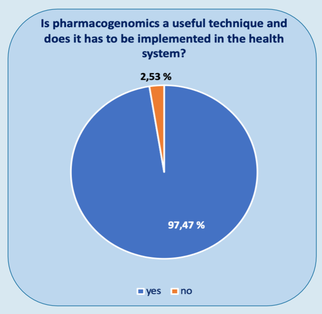
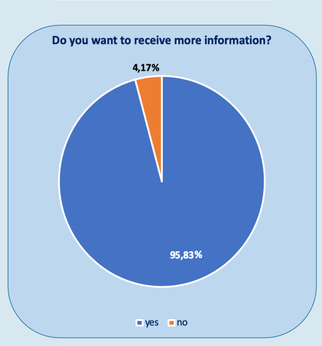
- → **Better videos than publications** (but considering their **duration**)
- → More **interactive and dynamic activities** through @pharmacogen
- → New IGTV videos explaining **practical cases** (more attractive for the public)
- → Creation of a **YouTube channel** where uploading the videos
- → **Collaborate with other scientific profiles** → DIVULGATION
- → **Carrying out with the project, trying to spread the pharmacogenomics knowledge**







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PHARMACOGEN

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